

**What is claimed is:**

1       1. A wireless communication device, comprising:  
2           a shielding unit;  
3           a first antenna unit transmitting a first signal  
4               between a first time and a second time; and  
5           a second antenna unit separated from the first  
6               antenna unit by the shielding unit,  
7               transmitting a second signal between a third  
8               time and a fourth time, wherein the third time  
9               or the fourth time occurs between the first  
10          time and the second time to form a  
11          predetermined interval in which the first  
12          signal and the second signal are simultaneously  
13          transmitted.

1       2. The wireless communication device as claimed in  
2       claim 1, wherein the first antenna unit is provided with  
3       a first parameter with respect to the shielding unit and  
4       the second antenna unit is provided with a second  
5       parameter with respect to the shielding unit, such that  
6       the first antenna unit generates first energy by  
7       adjusting the first parameter and the second antenna unit  
8       generates second energy by adjusting the second parameter  
9       and the first energy is substantially equivalent to the  
10      second energy.

1       3. The wireless communication device as claimed in  
2       claim 1 further comprising a first ground plane connected  
3       to the first antenna unit with respect to the shielding

4       unit, a second ground plane connected to the second  
5       antenna unit with respect to the shielding unit and a  
6       far-field position used as an observation point to  
7       observe a first reflecting effect formed by the first  
8       signal reflected by the first ground plane and a second  
9       reflecting effect formed by the second signal reflected  
10      by the second ground plane and equivalent to the first  
11      reflecting effect.

1           4. The wireless communication device as claimed in  
2       claim 1, wherein the first antenna unit and the second  
3       antenna unit are dipole antennas.

1           5. The wireless communication device as claimed in  
2       claim 1, wherein the first antenna unit is a 2.4GHz  
3       internal dipole antenna and the second antenna unit is a  
4       5GHz internal dipole antenna.

1           6. The wireless communication device as claimed in  
2       claim 1 further comprising a first ground plane connected  
3       to the first antenna unit, a second ground plane  
4       connected to the second antenna unit, wherein the first  
5       antenna unit is provided with a first transmission loss  
6       and the second antenna unit is provided with a second  
7       transmission loss, and difference between the first  
8       transmission loss and the second transmission loss is  
9       compensated by the first ground plane and the second  
10      ground plane.

1           7. The wireless communication device as claimed in  
2       claim 1, wherein the first antenna unit is a 2.4GHz

3 internal dipole antenna and the second antenna unit is a  
4 5GHz internal dipole antenna, and a second equivalent  
5 gain of the second antenna unit is approximately equal to  
6 1.77dBi when a first equivalent gain of the first antenna  
7 unit is approximately equal to 0.55dBi.

1       8. A wireless communication device, comprising:  
2           a shielding unit;  
3           a first antenna unit transmitting a first signal;  
4           a second antenna unit separated from the first  
5           antenna unit by the shielding unit,  
6           transmitting a second signal, wherein the first  
7           signal and the second signal are simultaneously  
8           transmitted; and  
9           a control unit electronically connected to the first  
10          antenna unit and the second antenna unit,  
11          modulating and demodulating the first signal  
12          and the second signal.

1       9. The wireless communication device as claimed in  
2       claim 8, wherein the first antenna unit is provided with  
3       a first parameter with respect to the shielding unit and  
4       the second antenna unit is provided with a second  
5       parameter with respect to the shielding unit, such that  
6       the first antenna unit generates first energy by  
7       adjusting the first parameter and the second antenna unit  
8       generates second energy by adjusting the second parameter  
9       and the first energy is substantially equivalent to the  
10      second energy.

1           10. The wireless communication device as claimed in  
2 claim 8 further comprising a first ground plane connected  
3 to the first antenna unit with respect to the shielding  
4 unit and a second ground plane connected to the second  
5 antenna unit with respect to the shielding unit, wherein  
6 the first antenna unit is provided with a first  
7 transmission loss and the second antenna unit is provided  
8 with a second transmission loss, and a difference between  
9 the first transmission loss and the second transmission  
10 loss is compensated by the first ground plane and the  
11 second ground plane.

1           11. The wireless communication device as claimed in  
2 claim 8, wherein the first antenna unit and the second  
3 antenna unit are dipole antennas.

1           12. The wireless communication device as claimed in  
2 claim 8, wherein the first antenna unit is a 2.4GHz  
3 internal dipole antenna and the second antenna unit is a  
4 5GHz internal dipole antenna.

1           13. The wireless communication device as claimed in  
2 claim 8 further comprising a first ground plane connected  
3 to the first antenna unit, a second ground plane  
4 connected to the second antenna unit, wherein the first  
5 antenna unit is provided with a first transmission loss  
6 and the second antenna unit is provided with a second  
7 transmission loss, and a difference between the first  
8 transmission loss and the second transmission loss is

9 compensated by the first ground plane and the second  
10 ground plane.

1 14. The wireless communication device as claimed in  
2 claim 8, wherein the first antenna unit is a 2.4GHz  
3 internal dipole antenna and the second antenna unit is a  
4 5GHz internal dipole antenna, and a second equivalent  
5 gain of the second antenna unit is approximately equal to  
6 1.77dBi when a first equivalent gain of the first antenna  
7 unit is approximately equal to 0.55dBi.